EXHIBIT 29

San Diego County Water Authority

August 23, 2017

Attention: Water Planning Committee

Report on Claude "Bud" Lewis Carlsbad Desalination Plant Operations for Fiscal Year 2017 (Presentation)

Purpose
To provide a summary of Contract Year 2016/2017 operational performance for the Claude "Bud" Lewis Carlsbad Desalination Plant.

Background
The Claude "Bud" Lewis Carlsbad Desalination Plant (CDP) started commercial operations on December 23, 2015. The project is a result of a long-term Water Purchase Agreement (WPA) executed between the Water Authority and Poseidon that was approved by the Water Authority Board on November 29, 2012. Under the WPA, the Water Authority agreed to purchase the entire output of the CDP – a minimum of 48,000 acre-feet and up to 56,000 acre-feet of product water annually. The Water Authority's water purchase payments compensate Poseidon for the fixed and variable costs of the CDP including debt and equity payments, as well as fixed and variable plant costs for electricity and operations and maintenance. All fixed costs are paid for through the purchase of the initial 48,000 acre-feet. Annual product water deliveries beyond 48,000 acre-feet up to 56,000 acre-feet are purchased at a price that includes just the variable costs of production.

The period from December 23, 2015 to June 30, 2016 was a partial contract year for CDP operations. During that period, 21,886 acre-feet of desalinated product water was delivered by Poseidon to the Water Authority. Contract year 2016/2017 (from July 1, 2016 to June 30, 2017) was the first full contract year for plant operations. Going forward, staff intends to report out on CDP performance following the conclusion of each full contract year.

Discussion
For purposes of this report, CDP performance is evaluated in the following categories: 1) water delivery; 2) water quality; 3) regulatory compliance; and 4) cost. Each of these categories are discussed below.

Water Delivery
Prior to the end of each contract year, and as required per the terms of the WPA, Poseidon and the Water Authority agree to monthly supply and demand commitments for the upcoming contract year. These commitments represent the monthly supply availability guaranteed by Poseidon totaling 56,000 acre-feet for the year and the minimum monthly delivery guaranteed by the Water Authority totaling 48,000 acre-feet per year.

The Water Authority met each month's minimum demand commitment, avoiding any "take-or-pay" penalty provisions of the WPA, and overall exceeded the minimum annual demand

commitment by 1,615 acre-feet. Since Poseidon was unable to meet the Water Authority's demand orders, Poseidon will be making an annual supply commitment true-up payment to the Water Authority for not meeting this supply obligation.

If Poseidon were able to deliver the full amount of water requested by the Water Authority, the requested deliveries over 48,000 acre-feet and up to 56,000 acre-feet, would have been purchased at just the variable cost of production (approximately $800/AF).

Poseidon was unable to deliver 9,196 acre-feet (49,615 AF – 40,419 AF) of requested water. The WPA accounts for this undelivered supply under different defined categories.

- Excused Supply Shortfall (estimated 1,605 acre-feet for contract year 2016/2017): For undelivered water classified as Excused Supply Shortfall, Poseidon has the opportunity to supply this amount of water in the future, under certain conditions. However, the Water Authority does not pay for the water until the water is actually delivered.
- Unexcused Supply Shortfall (estimated 5,961 acre-feet for contract year 2016/2017): For undelivered water classified as Unexcused Supply Shortfall, the Water Authority does not pay for this water and Poseidon has no opportunity to supply this water in the future. Unexcused supply shortfalls occurred during the months of January (68 AF), February (41 AF), March, (162 AF), April (3,364 AF), May (767 AF) and June (1,559 AF), 2017.
- Unscheduled Outage Units (1,630 acre-feet for contract year 2016/2017): For certain documented, unplanned outages at the plant, up to 1,630 acre-feet can be designated by Poseidon as Unscheduled Outage Units. Under the terms of the WPA, the Water Authority pays the fixed costs on this water.

During the initial operating years for large water treatment facilities such as the CDP, facility outages are not unusual as operators are fine-tuning control systems and adjusting to actual and changing source water conditions. In the case of CDP operations for contract year 2016/2017, the primary cause of the supply shortfalls, indicated above, was associated with operation of the reverse osmosis membrane system.

Beginning in late March 2017, Poseidon and its plant operator (IDE) began reporting high levels of chlorophyll and phytoplankton in the plant's feedwater from Aqua Hedionda Lagoon, that resulted in high turbidity in the pretreatment system filter effluent. Although the plant is designed to handle chlorophyll and phytoplankton (i.e., algae) in the feedwater, the level seen this past spring was an extreme, though not excused, event that led to a precautionary plant shutdown in April. It is also likely that the high filter effluent turbidity levels, along with the "learning curve" associated with optimizing the use of the plant's membrane cleaning system, contributed to premature fouling of the reverse osmosis membranes that resulted in reduced CDP production beginning in April and continuing through the end of the contract year. Other issues stemming from membrane fouling include rolled O-rings in the membrane pressure vessels and increased differential pressures. These conditions require the whole reverse osmosis skid (there

are 14 total skids in the plant) to be temporarily removed from service lowering the production capacity of the CDP.

In coordination with IDE, Poseidon is aggressively addressing the challenges and has taken the following measures to minimize operational impacts caused by these issues:

- Purchase and installation of new membranes to replace fouled membranes
- Off-site membrane cleaning to supplement the plant's Clean-In-Place system
- Review of membrane Clean-In-Place procedures and frequency
- Operation at lower recovery levels (temporary condition)
- Installation of real-time monitoring of algae in the lagoon and offshore
- Development of a proactive operational protocol for treating seawater with elevated algae content
- Installation of chlorination capacity at the intake to breakdown biological material coming into the intake and install monitors, aeration equipment, and improved coagulant and polymer feed capabilities ahead of the pretreatment filters to enhance biological removal of organic material in the pretreatment filters

Many of these corrective actions have already produced positive results and Poseidon anticipates the plant to be back at full capacity by next month. Because the WPA transfers operational risk to Poseidon, Poseidon has not requested, nor is it entitled to performance relief for these issues. Additionally, costs associated with correcting the membrane fouling issue are not the responsibility of the Water Authority.

Water Quality

The WPA sets parameters for raw seawater that the CDP is required to process and product water quality guarantees that must be met. Poseidon is afforded performance relief during events that cause raw seawater characteristics to be outside of the contractual limits, and is subject to financial penalties if product water quality falls outside its contractual limits. Product water and raw seawater quality for Contract Year 2016/2017 is summarized below.

Product Water Quality

Delivered product water quality met contractual water quality requirements, including federal and state drinking water standards for the contract year. On five occasions, IDE took corrective steps to address brief exceedances of pH concentration limits that were outside of the contractual water quality requirements. In these instances, IDE discharged the off-specification product water prior to delivery to the Water Authority until the contract requirements could be met. At no time was Water Authority system water quality impacted. IDE also worked with the Water Authority to develop a communications protocol to properly and timely notify the Water Authority and regulatory agencies of potential water quality issues.

Raw Seawater Quality

Raw seawater characteristics feeding the CDP were within contractual limits for the contract year except for short periods of time where either temperature or turbidity was outside of contractual parameters of 84.2 degrees F and 24 NTU, respectively. These issues led to temporary reductions to plant capacity.

Regulatory Compliance

The primary permits that regulate product water quality and plant discharges include the National Pollutant Discharge Elimination System (NPDES) issued by the San Diego Water Board, the Wastewater Discharge Permit issued by the Encina Wastewater Authority, and the Domestic Water Supply Permit issued by the Division of Drinking Water. Regulatory compliance is the responsibility of Poseidon along with any enforcement action associated with permit violations. The Water Authority receives copies of all compliance correspondence and may coordinate with Poseidon on issue resolution, as necessary.

Over the last year of operation, Poseidon received four notices requesting corrective action associated with permit compliance. These notices are summarized below:

- Sewer Discharge pH Exceedance (Encina Wastewater Authority) – Test results of a single sample was 0.3 mg/L above the allowable permit concentration of 12.0 mg/L
- Procedural issue (Encina Wastewater Authority) – Compliance sample was not taken within the required sampling period; late one day
- Administrative issue (Encina Wastewater Authority) – Meter calibration and training logs were not maintained properly
- Operational Corrective Action (Division of Drinking Water) – A high turbidity event at the Intake Pump Station was not responded to in accordance with the approved Operations Plan

Poseidon/IDE took corrective steps that were appropriate to resolve each action request and no outstanding issues remain open from the list above.

Poseidon has also self-reported on another ongoing permit condition related to chronic toxicity test results. Poseidon reported to the Water Authority that non-compliant results began in the previous contract year, and are an artifact of the conservative toxicity testing procedure set forth in the NPDES permit for the CDP and do not result in harm to the environment. Under the terms of the permit, the CDP is required to test for toxicity at higher discharge concentrations than are actually occurring at the compliance point. This is because the conservative testing regime set forth in the permit fails to take into consideration the initial dilution provided by the power plant. If the full initial dilution that is actually occurring is considered, provided in the ocean and by the power plant, 43 out of 44 of the samples tested from December 2015 to June 2017 have been below the toxicity limit in the permit. These results effectively demonstrate that the exceedance of the toxicity limit is a result of the failure in the permit's toxicity monitoring procedures to account for the dilution provided by the power plant discharge, and is not an

indication of the plant causing toxic conditions in the Pacific Ocean. Poseidon is working with the San Diego Water Board on a renewal of the NPDES permit that is expected to include a revised methodology for calculating toxicity compliance that will take into consideration the full dilution of the CDP discharge.

Poseidon is also working with the State Division of Drinking Water (DDW) to develop a modified approach to addressing minor salinity fluctuations within the reverse osmosis process. DDW used a conservative approach to establish salinity fluctuation limits in order to detect a potential breach in membrane integrity. However, the established limits also capture expected slight increases in salt passage due to temperature variation. The goal is to develop set limits that will protect public health while avoiding unnecessary shutdown of the reverse osmosis trains.

Cost

Payment to Poseidon for Contract Year 2016/2017 was approximately $91,053,000. Taking into account the payments from Poseidon to the Water Authority for not meeting its supply obligations (estimated at $3,585,000), the average unit cost for the year including conveyance pipeline costs was $2,412 per acre-foot. This cost is higher than the $2,368 per acre-foot projected unit cost for contract year 2016/2017 due to San Diego Gas & Electric Company electricity tariff increases beyond what was originally anticipated. Table 3 summarizes the cost components.

Table 3. Costs for Contract Year 2016/2017

	Contract Year 2016/2017
Total Water Purchase Cost*	$91,053,343
Desal Conveyance Pipeline Cost	$10,064,460
SUBTOTAL	***$101,117,803***
Poseidon Penalties	($3,584,478)
TOTAL	**$97,533,325**

* Includes debt service, equity return, fixed electricity and operating, variable electricity and operating, and unscheduled outage allowance charges

Although the CDP experienced numerous operational challenges last year, the Water Authority was protected by terms of the WPA from any financial burden linked to those challenges as outlined above. Staff is currently working with Poseidon on its annual reconciliation of the monthly invoices and will finalize all payments for Contract Year 2016/2017 by September 2017. The projected unit cost for contract year 2017/2018 is estimated at $2,439 per acre-foot.

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